CLAIMS

Claim 1. A gene injection instrument for injection drug to a biological body, comprising:

a pressure chamber for storing a gas;

a conduit having one end connected to said pressure chamber and a second end vented for injection into a biological body;

a throat section narrower than said conduit inserted in said conduit having a convergent inlet and a divergent outlet;

a drug container for storing drug in liquid form and located above the throat section with a needle tube to release said drug in liquid form as droplets into the throat section; and

a gas flow from said pressure chamber through said throat section to carry the droplets to the second end of the conduit.

Claim 2. The gene injection instrument as described in claim 1, further comprising a control system for controlling the said gas flow.

Claim 3. The gene injection instrument as described in claim 1, wherein the gas flow is at supersonic speed.

Claim 4. The gene injection instrument as described in claim 1, wherein the pressure in the pressure chamber is set between 50 to 500 psi.

Claim5. The gene injection instrument as described in claim 1, wherein the gas is selected from the group consisting of carbon dioxide, nitrogen and helium.

Claim 6. The gene injection instrument as described in claim 1, wherein the needle tube lies within 15 mm of the center of the throat section.

Claim 7. The gene injection instrument as described in claim 1, wherein the convergent inlet and the divergent outlet are symmetrical.

Claim 8. The gene injection instrument as described in claim 1, wherein convergent inlet and the divergent output are unsymmetrical.

Claim 9. The gene injection instrument as described in claim 2, wherein the control system controls the release of the droplets.

Claim 10. The gene injection instrument as described in claim 9, wherein the control system controls by means of changing the pressure of the pressure chamber.

Claim 11. The gene injection instrument as described in claim 9, wherein the control system controls by means of a stepping motor.